

PUBLIC HEALTH LABORATORY,

14, TEMPLE STREET, BIRMINGHAM,

JUNE, 1898.

TO THE SANITARY COMMITTEE OF THE WARWICKSHIRE COUNTY COUNCIL.

MR. CHAIRMAN, MY LORDS AND GENTLEMEN,

I beg to hand you herewith my summary of the reports of the Medical Officers of Health of the various Urban and Rural Sanitary Districts in the County for the year 1897. As far as I know there has not been any alteration in the area of the districts in the County, and my report will, therefore, take the same form as in the eight previous years I have had the honour of making this summary, viz., a summary of each Medical Officer of Health's report, followed by a consideration of statistics and other matters affecting the County as a whole. In the statistics the birth-rate, death and Zymotic death-rates are calculated per 1,000 persons estimated to be living, while the infant mortality is reckoned on children who die under one year of age per 1,000 registered births.

U R B A N D I S T R I C T S .

ASTON MANOR.

Mr. HENRY MAY takes up a considerable portion of his report for the year with a *resumé* of the work done during the time that he has been Medical Officer of Health for the district, and says: "Of late years these reports have been chiefly accounts of routine sanitary work done in carrying out measures originated in earlier years, and I do not think it will be inappropriate on this occasion if I report somewhat retrospectively and collectively on the sanitary work done in Aston Manor during the past 25 years, as well as on the special work of the present year." He takes this course, as he intimates that the time has arrived when he feels it necessary to resign his office. This *resumé* is very interesting, and gives an account of much excellent work carried on during the last quarter of a century, in fact, it may be said to be an account of the evolution of sanitation, and of sanitary local government in one of the most populous districts of England, for the period is synchronous with that of the time during which England has had the benefit of public health legislation. It follows, therefore, that as the size of the report is kept within the limits of previous ones, there is very much less said than usual as to the work done in the year under review, and it is somewhat difficult to give an abstract as full as usual for the one particular year.

During the year no less than 630 cases of infectious disease were notified, of which 376 were Scarlet Fever, 90 Diphtheria, and 78 Typhoid Fever. This is a considerably smaller number than in 1896, but is above the average for the eight years during which the Notification Act has been adopted. Mr. MAY records that no case of Small-pox has occurred in the Manor during the year. Speaking of Scarlet Fever, Mr. MAY says "there has been a moderate prevalence during the present year; a considerable increase in the autumn was followed by an abatement at the end of the year. The mortality of this year amounts to 3·7 per cent. of the notified cases, as compared with 3·7 per cent. in 1896, and with an average mortality of 4 per cent. among notified cases in the towns of England and Wales which supplied returns for that year. The proportion of the cases isolated at the hospital has been about the same as in the last two years, and, taking into account the mild type of the disease, there is not shown any falling off in the appreciation in value of hospital isolation." Mr. MAY further says, "It is evident, from the history of this disease in Aston Manor, that the majority of the population now escape Scarlet Fever, that childhood is the period of life when most cases occur, and that afterwards but few are attacked, and among these it rarely proves fatal. These are rational grounds on which to continue the efforts and expenditure of the past in trying to ward off attacks during childhood, and increase the means at work against this disease."

Mr. MAY shows that as regards Diphtheria there has been a considerable falling off both in the number of cases and in the number of deaths, for while in 1896 there were 222 cases and 51 deaths, in the last year there were only 102 cases notified and 15 deaths registered. The prevalence and mortality from

Typhoid Fever, Mr. MAY says, was practically the same as in the previous year. Measles appears to have been very prevalent, particularly in the five months April to August, for out of a total of 71 deaths registered, 60 occurred in this period.

Referring to Diarrhoeal disease, Mr. MAY says, "I am sorry to have to report that Diarrhoea is one of the most fatal diseases of Aston Manor, and that this year it is the most fatal. It is one of the weakest points in our public health work that so little is known of and so little done to prevent this dangerous disease, for which so little can be done in the way of cure." So high was the mortality, that the death-rate from Diarrhoea alone in Aston Manor reached the figure of 2·77. Two hundred and twenty-three cases proved fatal, no less than 126 of them occurring in August. Mr. MAY further says, "There is no royal road, no easy way of putting a stop to this summer mortality, which is becoming such a serious blot upon our sanitary record. The generally recognised cause is the local prevalence of special germs or organisms, multiplied or harboured by filth-laden soil and surroundings, rendered active by a rise in temperature to a certain point, and finding victims in feeble and badly-nourished infants. The means to be pursued must take various forms, improving nutrition, guarding the purity of air, water and food, and abolishing local insanitary surroundings and collections of filth. There is probably a contributory cause in the decadence in the vigour and vitality of children bred and brought up in town surroundings, as shown in the increase in premature births and in deaths from inanition and congenital debility."

Referring to the sanitary state of the district, Mr. MAY says, "The arrangements for the removal and disposal of excrement and house refuse can scarcely be considered satisfactory, although great improvements have been made in the last 25 years. Others are in progress, and it is doubtful if finality will be ever reached in this matter." Mr. MAY records further increases in the accommodation at the infectious hospital, and gives details of the routine sanitary work done during the year in regard to inspection and control of slaughter-houses and other places under the control of a sanitary authority.

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
78,919	32·8	17·0	4·8	200

BULKINGTON.

Mr. PEACOCK records a death-rate of 26·73 per 1,000 as against 14·61, or nearly double that of the previous year. There was a great increase of infant mortality, the figure rising from 95 in 1896 to 166 in 1897. This mortality is reported to be due chiefly to convulsions and premature births. A large number of deaths also occurred in people over 65 years of age—12 as against 7 in the previous year. The infectious cases have been few in number, viz., 8.

Referring to the Notification Act recently adopted, Mr. PEACOCK says, "The Notification Diseases Infectious Act has worked well during the year; and has been the means of quickly dealing with the cases, and so preventing a spread of infectious disease."

The only other subject touched upon in his report is that of an isolation hospital. He says, "I referred in my report for 1896 to the acquisition of an isolation hospital. Yours is a small population, but I should again advise your Council either to purchase a small portable hospital or try to come to terms with the Nuneaton and Chilvers Coton Council, so that any of your infectious cases can be received and treated in the infectious hospital of the above Authority. I believe you have secured a portable hospital for Small-pox cases, which could be erected at a short notice."

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
1,272	33·0	26·73	0·78	166

ERDINGTON.

Dr. A. BOSTOCK HILL again calls attention to the very large increase of population in this district, an increase which he estimates at 705, on a population of 13,000. The death-rate was practically the same as in the previous year, and was the very satisfactory one of 12·15. Speaking of infant mortality, Dr. BOSTOCK HILL says that "while the percentage of deaths of infants under one year to registered births is rather less, I am still compelled to say that the figure is far from satisfactory." He further says, "The same result is seen as in previous years, the great majority of the deaths occur from causes over which sanitary authorities have little control, and I can again, therefore, only commend this subject to those who, acting in touch with the mothers of the working classes, have the opportunity by precept and example, of educating them in the elementary hygienic principles so necessary to the life and the health of the infant."

One hundred and thirteen cases of infectious disease were notified under the Act, compared with 221 in the previous year, and 134 in 1895. Dr. BOSTOCK HILL says, "It will thus be seen that while there have been fewer cases notified during the year, the Zymotic mortality has been much higher than usual; and this is accounted for by the fact that the majority of the deaths were due to Diarrhœa, Measles and Whooping Cough, diseases which are not notifiable, and which, at present, at least, are very little under control."

Referring to Scarlet Fever, he says, "Only one death was registered from this disease, while 51 cases were notified, including 3 in the Workhouse, compared with 150 in 1896. This diminution in the number of cases notified is very gratifying, while it is also pleasing to note that the type of disease was mild, as the mortality was only 2 per cent." Measles was very prevalent throughout the year, and caused no less than 9 deaths. In consequence of this, the elementary schools were closed in December, a week earlier than usual. As regards preventive measures, handbills were distributed, giving advice on the care of cases and hints also as to the prevention of spread.

Twenty-five cases and 9 deaths were due to Diphtheria, the notified cases being rather fewer, but the mortality rather higher than in the previous year. Dr. BOSTOCK HILL refers to a serious outbreak of this disease which took place at Tyburn, and says, "I found the premises in a very insanitary condition. The cellar was wet, and the house generally damp, owing to defective spouting and jointing; there was an old vault privy. The house itself was dirty, while up against it in an outhouse several pigs were kept. The yard, which was unpaved, was also full of fowls, while finally the water supply was polluted. The cellar has been filled up, the house cleansed, the spouting repaired, the pigs and fowls removed, and the privy has been converted into an earth closet. As there was little chance of improving the water supply, and tap-water was not available, the water is now fetched from a well of known purity some distance away." Including the Workhouse, 24 deaths were registered from Diarrhœa in the district, double the number registered in 1896.

Referring to public scavenging, Dr. BOSTOCK HILL says, "It has been my duty in the past to call your attention to the necessity of the Council undertaking a system of public scavenging; and I can therefore heartily congratulate you on having commenced the necessary negotiations to this end."

In conclusion, Dr. BOSTOCK HILL says, "I can again refer with satisfaction to nearly all the points referred to in this report. Our death-rate, despite the great increase of population, is below the average of that of the last ten years, and although at first sight the increase of our Zymotic death-rate appears to be an unsatisfactory feature, on analysis we find that the increase is due, as I have shown, to Measles, Whooping Cough, and Diarrhœa, diseases over which, unhappily, a sanitary officer has little control."

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
13,000	23·07	12·15	3·0	146

KENILWORTH.

Dr. WILSON reports very satisfactory rates in this district. There was practically no prevalence of infectious disease, the only cases of Fever or infectious disease notified during the year being 4 cases of Scarletina, 2 of which were imported, and 2 cases of Erysipelas. Dr. WILSON says, "Though the birth and death rates of districts of small populations are sure to vary considerably from year to year, it will be seen from this table that the general death-rate, the death-rate from Zymotic disease, and the rate of infant mortality are all of them very much below even the low average of previous years; and when these exceptionally low death-rates are taken in conjunction with the remarkably few cases of infectious disease notified, I need hardly say that the town has presented a very clean bill of health throughout the whole of the year."

In respect to works of a public nature special attention has been given to sewer ventilation, particularly to the dead ends of branch sewers. Attention, too, has been given to the treatment of the sewage at the farm. Public scavenging has also been undertaken, which has entailed a somewhat heavy and unexpected expenditure so far. To lessen this Dr. WILSON recommends first "that any remaining deep midden ashpits should be done away with, and that the owners of houses within the statutory distance of the sewers and water mains should be called upon to convert all privies, ashpit middens or pail closets into water closets, or if the water mains are not within reach into slop closets; that all deep ashpits, even where water closets do exist, should be filled up to the ground level, and made properly accessible for scavenging; that owners of houses outside the drainage area, but which may be considered conveniently within the scavenging area, should also be called upon to alter all privies or deep ashpit middens, and convert them into dry closets not below the ground level and made accessible for scavenging, and if these conditions are not fulfilled that scavenging be refused;

that the men employed in scavenging should make a list of all these deep ashpits, deep midden ashpits or privies, in order that they may be properly dealt with; that the scavenging be done systematically and by sections of the town, so that no time be unduly wasted in taking carts long distances between houses.

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
4,430	22·5	12·6	0·45	50

LEAMINGTON.

Dr. BROWNE is able to give a very satisfactory report; the general death-rate is slightly lower than in the previous year, while the Zymotic death-rate is very low indeed, and but for deaths from Diarrhœa would have been almost nil. Scarletina caused 55 cases in all, of which 44 were removed to hospital. The disease was of a mild type, and in consequence some cases escaped detection. No fatality occurred. Fifteen cases of Diphtheria, with three deaths, were recorded. In 11 houses sanitary defects were discovered. Six cases of Typhoid Fever were notified, of which 3 were imported from a distance. In the other 3 houses sanitary defects were discovered.

Referring to general sanitary work, Dr. BROWNE reports that new sewers were constructed in Newbold and Rosefield Streets, 12-inch pipes being substituted for the old brick structures. At Dormer Place an old sewer under a block of houses was removed altogether. Dr. BROWNE says, "I should much like to see every brick drain in Leamington removed, and replaced by a proper sanitary pipe drain."

Speaking of the work done in the Health Department, Dr. BROWNE says, "This year was much the busiest year since I took office. Drains have been tested in 319 cases." Dr. BROWNE calls attention once more to the need of a public abattoir, and says, "I hope that the agitation will be carried on until the fact is accomplished." He points out that the borough is without a disinfecter of its own, and says, "fortunately so far we have had no breakdown of the present system, but I can easily foresee how such could occur." He suggests also that before long a destructor for refuse matter will be required. Finally, he calls attention to the urgent need of a public mortuary. At present, he says, "there is no place where a post-mortem examination can be conducted in a proper and skilful manner. The present structure is a mortuary in name only, and is entirely unsuitable, exposed to public view, improperly paved, without water supply, and accommodation for only one dead body. To prevent a public scandal this ought to be seen to without delay."

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
27,320	19·9	14·0	0·4	106

NUNEATON AND CHILVERS COTON.

Mr. PEACOCK reports a rather higher death-rate for this district than in the previous year, due to some extent at least to a higher infantile mortality. The infantile deaths were due chiefly to Measles, Whooping Cough, Diarrhœa, Bronchitis, Pneumonia, and Wasting Diseases. Scarlet Fever appears to have been rather prevalent in the first quarter, and Mr. PEACOCK says that "many children have been found both at school and in the street in the peeling stage." Eighteen cases of Diphtheria were notified in Nuneaton Ward, while altogether 78 cases were notified. In many instances Mr. PEACOCK attributes these to smells arising from the sewers. Whooping Cough and Measles were also important causes of fatality. Diarrhœa, too, was responsible for 28 deaths, as compared with 11 in 1896. Eight cases of Typhoid Fever were reported, of which 6 occurred at Nuneaton. In most of the cases no cause could be traced.

Early in the year the original hospital for Small-pox cases was opened as an isolation hospital. Mr. PEACOCK says that "the hospital has been a great boon to the community, and from the various centres of infection after the removal of the patient no further case was reported." He further says "A considerable amount of ignorance and prejudice has to be contended with, but I feel sure the more the community is educated to the advantages of such an institution the more readily will they make use of it."

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
17,716	41·57	20·38	4·39	182

RUGBY.

Dr. WILSON explains that, owing to building having taken place so rapidly of late years, it is somewhat difficult to estimate correctly the population. He, however, taking advantage of an enumeration made at the close of the year for the purpose of a water supply, believes that a fairly correct estimate at the middle of the year would be 14,750.

He records the very favourable death-rate of 11·3, and shows also that the deaths from Zymotic disease have been only 8, giving the very low rate of 0·54. He says, "Of the 2 deaths attributed to Searlatina, one occurred in Cambridge Street and the other in Oxford Street, and altogether 15 cases of the disease came under notice during the year, but in the absence of notification it is highly probable that there were a good many other cases which escaped notice." Dr. WILSON further says, "There were no deaths from Diphtheria, Membranous Croup, or Typhoid Fever, nor were any cases of those diseases brought under my notice."

As regards works of a public nature, Dr. WILSON says, "Plans have also been prepared for new additional public slaughter-houses, near the Cattle Market, and when these have been approved and completed, it is to be hoped that some satisfactory agreement will be entered into to do away with the few slaughter-houses in the centre of the town, and eventually all in the town." In respect to sewerage he says, "The sewers have been kept well flushed, and the disposal of the sewage, though attended with difficulties, has this year given rise to no complaints of serious pollution of the river." The main outfall sewer through the Cattle Market had to be relaid owing to its defective condition. Other works will soon be completed, such as the construction of the main outfall sewer from the manhole on Messrs. Willans & Robinson's property to the settling tank at New Bilton. During the year the Council purchased about 80 acres of land for the further purification of the large increase in the volume of the sewage, while the drainage of the low level sewage farm will be commenced as soon as the main effluent from under the Midland Railway is completed. Other minor improvements have been carried out or are in progress, such as the connection of the sewerage system from King Street to Essex Street, the construction of several manholes and flushing chambers, and the fixing of new gullies in various parts of the town.

With regard to water supply, new water mains have been laid down in all the new streets and street extensions, and all the water fittings have been carefully inspected. The new additional filter beds are also nearing completion, and the laying of a new rising main from the Avon water-works to Railway Terrace will be soon taken in hand. The negotiations now going on with regard to a new intake from the river not exposed as the present one is to flood disturbances, and to provide increased storage, will it is to be hoped soon be completed on a satisfactory basis. The new filter beds, increased storage for sedimentation, and the greatly reduced exposure to flood disturbances by the proposed new intake, will greatly improve the appearance of the water, so that it will be always bright and clear, while the works carried out at Newton and Hillmorton last year have removed all risks of serious pollution.

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
14,750	23·0	11·3	0·54	105

STRATFORD-ON-AVON.

Dr. THOMSON says, "In presenting my report on the health of the Borough for the year 1897, it is with much pleasure I draw attention to the fact that the mortality rates for the year are uniformly very low, and that infectious disease is almost entirely absent from the statistical tables as a cause of death. It is true of course that the statistics derived from the basis of a population numbering under 9,000 are subject to much greater variation from year to year than is the case where large centres of population are dealt with, but at the same time it is highly encouraging to find that in the past year the improvement is particularly noticeable in connection with those mortality rates which sanitation most directly influences, viz., the Zymotic death-rate and the infantile death-rate."

Thirty-three cases of Scarlet Fever were notified, and it is worth recording that all of them were isolated in hospital. Only one case of Enteric Fever was recorded, and this was probably imported. Eight cases of Diphtheria were notified, two of which were sent to hospital. Dr. THOMSON records that Vaccination is effectually carried out in the borough. Although no property has been dealt with during the past twelve months under the provisions of the Housing of the Working Classes Act, there are, he says, "several properties in the town which might be closed or improved with advantage, but the drawback against making any closing order lies in the fact that a scarcity of house accommodation already exists. Most of the cottage property in the borough is free from the objection of being penned in and deprived of

fresh air, but many of the cottages are absolutely unfit for an average-sized family to live in, the cubic space of the sleeping rooms being inadequate, and the number of bedrooms being too small."

Referring to slaughter-houses, Dr. THOMSON says, "It would be a great improvement from a sanitary point of view if slaughtering in the more thickly populated parts of the town would be discontinued."

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
8,488	22·1	13·5	0·1	90

SUTTON COLDFIELD.

Dr. A. BOSTOCK HILL reports that the death-rate is considerably below normal, while the Zymotic death-rate is only one third of that of 1896. In 1897 the only Zymotic disease unduly prevalent was Diarrhœa; the mortality from Phthisis was only three-fifths of that of the previous year. He also records a considerable fall in the figure of infant mortality, while no less than 36·5 per cent. of all the mortality occurred in persons aged 65 and upwards.

He records that only 35 cases of Scarlet Fever were notified, compared with 98 in 1896, and of these 23 occurred in Maney Ward. Referring to these, he says, "The cases at Maney were interesting and instructive. At the end of September a case of Scarlet Fever was reported in Duke Street, and on visiting the premises the Inspector was informed that another case existed which had admittedly been concealed. He reported the matter to me, and on investigation I found that such was the case. A special meeting of the Health Committee was called, and on the facts being laid before them prosecutions for non-notification and for exposure were authorized, and as a result the defendant was fined four pounds and costs. It was proved at the hearing that the defendant concealed the fact of infection existing because he said he did not want the child to go to hospital, but as he sent him to school while desquamating he infected no less than 19 other cases directly and indirectly, 18 of which were sent to hospital, the cost of this to the Borough being about £180."

Dr. BOSTOCK HILL records a marked diminution in the number of cases of Diphtheria, for only 6 were reported during the year compared with 18 in 1896, while the only cases of Typhoid Fever in the borough were two, which were imported respectively from Handsworth, and from London.

The mains of the South Staffordshire Water Company have been extended through the village of Little Sutton, the Council agreeing to subsidise the Company until such time as the water rates from the houses supplied will make up a fair return on the outlay. Arrangements have also been made for the extension of the Water Company's mains through Hill village on like terms. Other extensions have been made by the company in various parts of the borough to supply new houses which have been erected. In connection with this subject, Dr. BOSTOCK HILL says, "I am bound to say that in my judgment it should be compulsory on all water-companies, having powers to supply a district, to extend their mains as the increased building of the houses requires without any guarantee of payment by the sanitary authority. There is no doubt that in many cases it would be less expensive for the authority to supply new districts themselves rather than make terms with the company to do so, but as the companies have legal rights of supply it is only reasonable that in the public interest they should also have the obligation of supplying the requirements of the people, even if for a time it could not be done at a rate which would satisfactorily reimburse them for the outlay."

Referring to offensive trades, Dr. BOSTOCK HILL says, "My attention was called to the establishment of a tripe-boiling business in Queen Street, and as the premises were unsuitable the tenant was informed that no sanction could be given to it, and the business must be discontinued. This was done. I also had my attention called to the fact that the boiling of offal was carried on in connection with some of the slaughter houses, and in consequence of representations made that this is in reality an offensive trade within the meaning of the Act the occupiers have discontinued the practice."

The report records also that Vaccination has been again well performed in the borough, and great credit must be given to the Vaccination Officer for having achieved this result.

In conclusion, Dr. BOSTOCK HILL says, "I can heartily congratulate the Committee on the facts and statistics obtained in this report. Not only is our death-rate largely below the average, but there has been comparatively little of those infectious diseases which are amenable to sanitary effort, and if it had not been for the prevalence of Diarrhœa in the autumn, I should have been able to record one of the lowest Zymotic death-rates ever experienced."

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
11,641	19·15	11·59	0·7	103

WARWICK.

Dr. WILSON reports that not only is the general death-rate much below the average of previous years, but that this also applies to both the Zymotic rate and the rate of infant mortality. The fact, too, that only two deaths were attributed to infantile Diarrhœa during a year when this disease was exceptionally prevalent in most towns and crowded localities throughout the country, testifies in itself to the successful efforts which are continuously made in the direction of sound sanitation, and the removal of nuisances. Indeed, with the exception of the disappointing and continued prevalence of Scarlatina of a mild type, the borough has continued to be very free from fever or infectious disease, and the general health as gauged by the returns has been very satisfactory."

Dr. WILSON reports that Scarlatina of a very mild type continued prevalent, and ascribes it to the very mild nature of the disease, which was not therefore suspected and no doctor was called in. He says, "All these very mild cases formed connecting links which through attendance at school continued to spread infection. There is no doubt that prompt removal to hospital kept the disease in check, but for the reason stated it was impossible to stamp it out altogether."

"Seven cases (without a death) of Typhoid Fever were notified; two of these were imported, while two were associated with foul closet conditions."

Concerning works of a public nature, the Surveyor reports that the increased supply of water obtained by the extension of the Haseley adits in the previous year has removed all complaints of shortness of supply in the upper parts of the town, and has also met all demands for street watering. Dr. WILSON records improvement both in the trapping of the sewers, and in the sewers themselves, and says, "I would again recommend that the outfall sewers of the town should receive special attention to prevent the formation of deposits, because it is these deposits and the deposits in the catchpits of the sewers which generate the foul gases sometimes complained of in respect to sewer ventilators."

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
11,980	26·2	14·7	0·58	105

RURAL DISTRICTS.

ALCESTER.

Mr. JEPHCOTT reports a satisfactory general death-rate, Zymotic rate, and rate of infant mortality, though the Zymotic rate is considerably higher than in 1896. He is able to record that no death occurred from either Small-pox, Diphtheria, Typhoid Fever, or Diarrhœa. Sixty-four cases of Scarlatina were notified. Referring to these, he says, "Schools played a sensible part in the cases arising in Studley in two outbreaks shewing themselves in the spring and autumn months of the year." Only one case of Typhoid Fever was notified, and although the drinking water in use was reported as ill-adapted for drinking purposes, Mr. JEPHCOTT says, "There was a possibility of the disease having been contracted away on one of the occasions when the patient left home, she having then visited a town where Typhoid Fever had for some time before and since been more or less in evidence." Measles and Whooping Cough were both prevalent in parts of the district. Mr. JEPHCOTT says that "No change has yet been effected in the system of disinfection in vogue in connection with the sanatorium, which still merits the description I have repeatedly applied to it in previous reports." He further says, "I now learn (February, 1898), from the report of the Sanitary Committee of the County Council to that body, at the meeting held in Warwick, February 1st, 1898, as given in the *Warwick Advertiser*, February 5th date, 'that the Vice-Chairman of the Joint Hospital Committee (who is responsible for the conduct and management of the Sanatorium) had stated that this matter was engaging the attention of the Joint Hospital Committee.'"

"I note this with considerable satisfaction."

"I have since been informed by the Sanitary Inspector (Mr. GANDER) who is steward of the institution (there is no medical superintendent), that under the instructions of the Joint Hospital Committee henceforth only articles of clothing, the property of the patients (I take it that this applies to hats and shoes, etc., also) which can be boiled, are to be permitted to be taken away from the Sanatorium on a patient's discharge therefrom. This is, I suppose, intended to endeavour to obviate the risk now run under the present system of disinfection employed."

Referring to the water supply, Mr. JEPHCOTT says, "There has, during 1897, been no particular or official alteration in the supply of water in any portion of your district, shallow wells of old and faulty construction, as have been repeatedly mentioned in past years' reports, constituting the main source of supply, and these, even, without pumps, and their surroundings badly covered and paved, and so liable to surface pollution." Mr. JEPHCOTT complains that the quantity and regularity of the public supply of Alcester was

by no means all that could be desired, and states that complaints, loud and frequent, were made, more especially as regards evening and night supply for domestic purposes. He also says that the "irregular supply of water contributed, no doubt, to the faulty working of the Alcester sewers last year. A proposal was made by the Surveyor for obtaining a supply specially for flushing purposes, but as proposals were made by the Water Company to give a sufficient supply for flushing purposes, at a reduced cost, the matter is still under consideration. Mr. JEPHCOTT says, "In the face of the fact that it was found necessary by the Water Company so frequently to cut off the supply from the town for all purposes in the evening and night (presumably on account of the quantity of water at disposal), it seems difficult to understand how sufficient can be provided for flushing purposes without further perpetrating a wrong on the private consumers, who are rated for a supply of water for domestic purposes, which is even now far from constant or sufficient. The want of a regular and sufficient supply of water in the public mains in case of fire was forcibly shown on the occasion of a recent local outbreak, when the result was then disastrous, but which, had it occurred in the High Street of our town, and during the night would, in all human probability, have been simply appalling."

Mr. JEPHCOTT calls attention to the necessity of sewers at Crabb's Cross, and explains that difficulties have arisen in the Council becoming possessed, by voluntary sale, of the land necessary for the outfall and disposal works required. Studley Common and Station Road, Studley, both badly need sewerage. He says, "Complaints are repeatedly reaching me respecting nuisance, and I fear danger to health arising from want of the carrying out of this work, by no means an extravagant or very costly business, and to which I think the residents of this portion of Studley Parish are justly entitled." Referring to the sewerage of Wilmcote, he says, "While during the year much as heretofore has been said, little (unfortunately) has been accomplished."

Referring to scavenging, Mr. JEPHCOTT says, "No less than 532 loads of ashes and domestic refuse were removed by your Inspector's staff from the township of Alcester, in 1897. I could only wish that this official scavenging were carried out all over the district regularly and frequently, and thus prevent the filthy and reeking accumulations so often met with, only too frequently in dangerous proximity to sources of domestic water supply, and otherwise by deleterious emanations threatening the health of the dwellers in their vicinity."

Speaking of bye-laws, Mr. JEPHCOTT says, "Under this head I can only write with regret that no progress has been made, and that we are without an up-to-date code under which to carry out the sanitary work of the district. During five years past new bye-laws have been 'under consideration,' and yet, after all the time and labour bestowed upon them, I am only able to write as above, for some reason or other our proof copies failing to receive the approval and sanction of the Local Government Board, thus rendering a revisal of the same necessary, and practically entailing a repetition of the whole of the work in connection therewith, and a corresponding and most regrettable delay in their adoption and introduction into use."

Speaking of river pollution, Mr. JEPHCOTT says, "This continues, as noted in past reports. Fortunately, I have received no important complaint as to nuisance arising therefrom during the year just ended, although what threatened to be serious cause for nuisance came under your official's notice at Studley, from apparent want of care and management in the treatment of sewage from the Redditch Local Board District, on the land devoted to the purpose near that village by the tenant of the land in question. Prompt action on the part of your Inspector and the officials of the Redditch Local Board resulted in an early and satisfactory termination of the nuisance, and so far no recurrence of the same has been complained of."

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
11,600	26.46	15.43	0.94	78

ATHERSTONE.

Mr. MEARS is able to report a lower death-rate than in any of the three preceding years, while the number of cases notified under the Act was slightly more than two-thirds of the previous year. The Zymotic death-rate, too, is satisfactory. Scarlet Fever was somewhat prevalent, but it appears to have been of a mild type, as only three deaths occurred, while although 20 cases of Typhoid Fever were notified, not one proved fatal. It is very satisfactory to observe that no less than 85 cases of Scarlet Fever, 2 of Diphtheria, and 5 of Typhoid Fever were removed to the Infectious Hospital.

Speaking of an outbreak of Typhoid Fever in Richmond Road, Atherstone, Mr. MEARS says, "I found that during severe storms the sewer became choked up, and the sewage backed up, came out of the gratings and lay on the surface of the ground, in one case close to a well. The people were forbidden to use the water for drinking, and the sewer was cleaned out, but I think this matter requires further attention, as I believe the backing up of the sewage will occur again during severe storms."

Mr. MEARS records that the public scavenging has been more satisfactory than under the old system, and says, "I think, however, that the work ought to be done more systematically by the contractor, as frequently an ashpit is only partly emptied, and I have often observed ashpits overflowing, and the refuse lying about the yard."

Speaking of the water supply of Polesworth, Mr. MEARS says, "The consumption of water has more than doubled since 1890, the increase being from 8 to 17 million gallons, and the District Council will have to take into consideration the providing of more pumping power to meet the demand of the area supplied. The present engines are not powerful enough, as they have to be kept at work 10 to 12 hours on every week-day, and pumping also has to be done on Sundays."

Referring to Baddesley, Baxterley, Bentley, and Merevale, Mr. MEARS says, "These parishes are still without an adequate water supply," and after quoting a previous report made by him on the subject, he says, "I must point out that this matter has been repeatedly brought before the notice of the Council, and that a grave responsibility is incurred if these parishes are not, without delay, supplied from some source with an adequate amount of pure water."

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
14,885	38·9	15·1	1·07	142

BRAILES.

Dr. FINDLAY reports a fairly satisfactory death-rate for this district, and one almost identical with that for the two previous years. The Zymotic rate was very satisfactory, being only 1·1 per 1,000 of the estimated population, while of the eight deaths registered only two were due to Diphtheria, and none to either Scarlet Fever or Typhoid Fever. Dr. FINDLAY further says, "There has been no epidemic of notifiable disease in the district, but Measles has been prevalent in several of the villages, as also Whooping Cough."

Referring to an isolation hospital, Dr. FINDLAY says, "Some means of isolating cases where the home surroundings renders any attempt at isolation impossible, is much needed in the district. At Honington 2 cases of Diphtheria were isolated as mentioned before in a lodge on the Honington Estate, which fortunately happened to be empty at the time, but this means of providing accommodation is at best unsatisfactory, and very expensive." He also calls attention to the necessity of bye-laws being adopted for the keeping of pigs in styres close to human habitation, and for the hours of removing night-soil, &c.

He also calls attention to the necessity of something being done to improve the public water supply at Halford and Whatecote. He says, "The water supply of this village is still very unsatisfactory, the only pump well is situated at a considerable distance from the village, and was some time ago found to be contaminated with animal matter. At Long Compton in summer the supply at the upper part of the village is defective, while at Little Compton there appears to be plenty of good water, but it is badly distributed throughout the village."

Referring to drainage, Dr. FINDLAY says, "At Honington the drains are nearly all untrapped, or the traps become defective and the sewers are mostly merely surface-water drains. Mr. TOWNSEND has employed an engineer who has produced a scheme for a complete new system of sewage, which when carried out as it is to be at an early date will place the village in a good state of sanitation." At Little Compton, he says, "Part of the existing sewer has been cleaned out, and the bed of the stream passing through the village has also been cleaned out, but the general drainage arrangements are not satisfactory."

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
6,686	22·3	16·9	1·1	133

CASTLE BROMWICH.

Dr. A. BOSTOCK HILL reports the very satisfactory death-rate of 11·4 per 1,000, and says, "This rate is the more satisfactory because in 1896 it was phenomenally low, viz., 6·6, and it might have been expected to have risen proportionately higher in 1897." Measles was very prevalent in the early summer and the schools both at Castle Bromwich and Water Orton were closed in consequence, indeed nearly all the children in the district appear to have had the disease. Five of the cases proved fatal. Twelve cases of Scarlet Fever, one of Typhoid Fever, and one of Diphtheria were notified, the Typhoid Fever case being associated with a largely polluted well water. This has since been done away with, tap water being substituted.

The City of Birmingham water mains have been further extended at Water Orton. The sewerage scheme for Water Orton has been completed, and all the house connections made, and in this respect the village has been put into a thorough Sanitary condition. One hundred and eleven houses have been connected. A new scheme for the proper sewerage of Castle Bromwich has been drawn up, and at the end of the year the necessary work for carrying it out had been commenced.

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
2,452	26·1	11·4	2·0	125

COVENTRY.

Mr. C. W. ILIFFE says of this small district, "During the year 1897 there has been a singular absence of Zymotic disease, which has been confined to Scarlet Fever and Measles, the origin of which has not been located." Mr. ILIFFE reports that there are no offensive trades in the district, and that the dairy farms and cowsheds are clean.

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
305	36·6	6·66	3·2	90

FARNBOROUGH.

Mr. FRANEY says, "I have had reported to me under the Notification Infectious Disease Act four cases, viz., one Scarlet Fever, one Diphtheria, one Membranous Croup, and one Erysipelas. They occurred in different villages, and at long intervals, and in no instance did they appear to arise from any insidious condition of the locality."

He further says, "during the year I have inspected the villages, and found the bakehouses clean and in good order." House drains are attended to and improvements made as necessity arises.

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
1,697	28·28	13·55	0·5	83

FOLESHILL.

Mr. ORTON says, "The year was characterized by unexampled prosperity, in particular the cycle industry being responsible for this. Buildings were rapidly developed, and owing to the scarcity of houses overcrowding prevailed, much against the health of the community. It is satisfactory to know that the long-looked-for bye-laws are sanctioned, and have been in force since November. Although generally admitted to be of a stringent character they have had no effect on the building enterprise, no less than 114 plans of dwellings of an artisan class having been recently submitted to the Authorities."

One hundred and seventy-seven cases were notified under the Act, of which 70 were due to Scarlet Fever, 5 to Diphtheria, 49 to Typhoid, and 27 to other continued Fevers. Referring to Scarletina, Mr. ORTON says, "The disease was generally of a very mild type, the only two deaths which occurred were in each instance signals of the disease, and probably due to carelessness on the part of the custodians of the children." Of the 49 cases of Enteric Fever notified, 26 occurred in Foleshill, and 23 in Bedworth.

Speaking of an infectious hospital, he says, "The need of an infectious hospital was here exemplified. I understand that the offer of the site on which it was proposed to erect this building has been withdrawn. At the present time the Council are not moving in the matter, but I may say that in all cases where there is danger of infection the patients are conveyed to the Coventry Infectious Hospital, an undertaking being given by this Council to pay 21 shillings for their maintenance."

Speaking of water supply he says, referring to Foleshill parish, "Since my last report the district to which I then alluded as requiring a more ample supply has to a certain extent shown improvement by the deepening of some of the more shallow wells. It is satisfactory to be able to state that a Bill will be submitted to Parliament for confirmation in the ensuing session, whereby it is proposed to supply this parish together with six other smaller parishes in this district with water, and the promoters on behalf of the proposed company have given an undertaking to supply this need to the most populous part of the parish of Foleshill within 18 months of the passing of the Bill. The Council have signified their approval of this measure, and trust the Local Government Board will do all in their power to secure its passage through Parliament. As regards Bedworth plans for the proposed scheme have been approved, and the tender for carrying out the works has been accepted. The parish of Keresley is said to be inadequately supplied. The water bill alluded to above will be of service here as their mains will pass through the parish."

Referring to sewerage, Mr. ORTON says, "A scheme for the sewerage of the parish was prepared at an estimated cost of £30,000. The Chairman of the Parish Council called a parish meeting at which the scheme was not generally considered satisfactory. It is now left in abeyance to see if the North Warwickshire Water Company's measure passes through Parliament, and should this occur I believe they will re-consider their position. A smaller scheme was afterwards prepared, but the Rural District Council did not think the scheme would be successful for the same reasons, viz., the want of a water supply."

Scavenging is said to have been carried out both in Foleshill and Bedworth.

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
22,800	34·3	17·7	0·5	147

MONKS KIRBY.

Mr. TUBB THOMAS reports very satisfactory rates in this district, in fact there were no deaths from the principal Zymotic diseases, and only 10 cases of infectious disease were notified. Owing to an outbreak of Scarlet Fever at Brookhurst in November it was necessary to close the school.

Referring to water supplies, Mr. TUBB THOMAS says, "Four samples were analysed, and all found unfit for use." As regards works of a public nature which have been completed in the village of Monks Kirby, about 60 yards of new drain have been laid by the owner. At Pailton 32 yards of 15-inch sewer have been relaid.

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
1,824	18·6	9·8	<i>nil</i>	117

NUNEATON.

Mr. COOKSON says, "In presenting you with my annual report as to the sanitary state of the district, I am pleased to record that the death-rate has been low; the Zymotic death-rate is also favourable; on the other hand the infant mortality is very high—177 per thousand. This, however, is accounted for by the fact that 5 out of the 8 children dying under one year old were from feeble birth, occurring a few hours or days after birth." Three cases of Diphtheria occurred at Wolvey, one proving fatal. A serious outbreak of Scarletina occurred at Wolvey during the last two months of the year, which Mr. Cookson says, "had there been an isolation hospital to which the cases might have been removed, might have been checked during the early stage of the epidemic, as parents allow their children to go into the streets during the highly infective stage of desquamation. However, unfortunately, the Act of Parliament does not make any provision for compulsory removal of an infectious case to an isolation hospital, even where one is provided." One case of Typhoid Fever occurred at Burton Hastings in a house, the surroundings of which were very insanitary.

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
1,703	26·3	11·7	1·7	177

STRATFORD-ON-AVON.

Dr. THOMSON records satisfactory death, Zymotic death-rates and rate of infant mortality. Sixty-two cases of Scarlet Fever were notified, 55 of which were sent to hospital. Only four cases of Typhoid Fever were reported, and one of these contracted infection away from home. In two other cases insanitary conditions were found. The well water in use on one of the premises was found to be impure, and in the other the premises were insanitary. Dr. THOMSON says, "All these patients were nursed at home, and although precautions are always given as to the disposal of the excreta, it must be considered unsatisfactory to nurse Typhoid Fever patients at their homes in villages deriving their drinking water from wells. Even when there is every care taken in the disposal of excreta, the disease may be spread in the washing of bed and other linen used by the patient." Measles and Whooping Cough were both widely spread, and elementary schools were closed in several places owing to their prevalence.

Bye-laws have received the sanction of the Local Government Board, and have become operative in the district. Dr. THOMSON says, "Although many of the requirements may appear unduly stringent it must really be to the ultimate benefit of the property-owner that such is the case."

An artesian well has been sunk in Alveston parish, in order to supply that district, and possibly also, Wellesbourne, with an ample and pure supply. In the village of Moreton Morrell the deepening

of wells and the sinking of a new deep well have proceeded. Dr. THOMSON reports also that a nuisance was created by the discharge of sewage into the brook at Kington, and says, "since that time improvement of the existing conditions is under consideration, and it will be an object to have the matter dealt with before the warm weather comes again."

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
10,992	24.0	15.4	1.2	98

TAMWORTH.

Dr. FAUSSET reports a very much improved death-rate, viz., 12.7, as compared with 17.1 in the previous year, while the infant mortality has fallen from 158 to 119. There were no deaths from Zymotic disease, except seven from Diarrhoea. Scarlet Fever appears to have been somewhat prevalent throughout the year, but of the 98 cases notified no less than 83 were isolated in hospital. Fourteen cases of Typhoid Fever were reported, of which 13 occurred at Kingsbury. Dr. FAUSSET says, "An analysis of the water proved the wells to be in a frightfully polluted state, and from their position and the formation and character of the soil it appeared as though the water was derived from the same source, and that it was dangerously contaminated, probably by reason of the drains, privies, cesspools, middens, or pigstyes, or by the deposit of manure in or on the ground in the neighbourhood of the wells. The wells were all closed, and water has since been supplied from the mains at Dosthill."

Referring to Diarrhoea, Dr. FAUSSET says, "In August this disease was very prevalent, and five deaths of infants under one year of age occurred at Glaseote, and one at Kingsbury, and in the following month a sixth death occurred at Glaseote."

Referring to sanitary work effected during the year, Dr. FAUSSET says, "Owing to difficulty experienced in draining the houses in West Street, Kettlebrook, the main sewer was taken up and relaid at a greater depth for a length of about 50 yards." Nothing has been done towards dealing with the sewage from Kettlebrook, and owing to buildings being rapidly proceeded with, the subject is daily becoming more urgent. The village of Shnttington has had difficulty with its water supply, and it has been agreed, with the sanction of the Local Government Board, to lay the mains of the Tamworth Waterworks throughout the village. Trouble appears to have been caused by the sanitary arrangements in part of Wilnecote. At Belgrave Road most of the closets and ashpits are on a higher level than the houses, and consequently in wet weather when the ashpits are more or less full the yard space between them and the houses becomes wet and sodden, and in a very objectionable state. The Kingsbury Water Scheme has been further forwarded by the purchase of land necessary for the making of the reservoir, and a Local Government Board enquiry is shortly to be held. Dr. FAUSSET says, referring to this, "It is imperative that this scheme should be carried out as speedily as possible, for since the epidemic of Enteric Fever broke out in November last all the wells in the village have been closed as all the samples of water analysed proved to be dangerously impure. Water is now carted daily at considerable expense from the mains at Dosthill."

Referring to the prevention of floods, Dr. FAUSSET says, "Remembering that it only requires a few days steady rain to make a flood, I therefore again, as in a previous report, press upon you the necessity of completing the scheme for the removal of the remaining weirs in your district. It must be remembered that the parishes of Fazeley and Wigginton have contributed towards the improvement that has been effected by the removal of the Castle weir, and the cleaning of the river bed above it, and have as yet received no advantage, whereas, if the scheme were completed as originally proposed, the parishes joined in it would alike derive benefit."

VITAL STATISTICS.

Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
10,819	33.0	12.7	0.6	119

RURAL DISTRICTS IN MID-WARWICKSHIRE COMBINED DISTRICT, INCLUDING
MERIDEN, RUGBY, SOLIHULL, SOUTHAM, AND WARWICK.

MERIDEN.

Dr. WILSON reports that the general death-rate, the death-rate from Zymotic disease, and the rate of infant mortality are all below even the low averages of previous years. Scarletina occurred in scattered cases at various parts of the year, two of the cases proving fatal at Coleshill. Measles was prevalent at Hampton-in-Arden, and the schools in consequence were closed. Only one case of Typhoid Fever was notified.

The question of the water supply of Marston Green came up at the latter end of the year, many of the shallow surface wells being found to be polluted. A set of building bye-laws has been prepared which Dr. WILSON says, "When approved and adopted, will prove of great value in preventing the many structural faults and drainage defects which are so frequently discovered in newly erected houses without such provision."

RUGBY.

Dr. WILSON reports a death-rate slightly higher than the average of previous years, but with the exception of slight outbreaks of Scarlet Fever, and a sharp outbreak of Whooping Cough at Newbold-on-Avon, the general health of the district was satisfactory. There were no cases of Diphtheria notified during the year, and only 3 cases of Typhoid Fever, while 31 cases of Scarlet Fever were reported. These were mostly of a mild type, and by closing the schools in these instances the spread of disease was prevented. The schools at Newbold were closed owing to the epidemic of Whooping Cough referred to.

New outfall sewerage works were carried out at Newton, and improvements of the outfall at Hillmorton to prevent pollution of the river. The nuisance at the outfall at Brinklow was greatly abated by the use of alumine-ferrie blocks. The employment of a man whose sole duty is to attend to the proper distribution of the sewage on the various small sewage farms in the district has been of great service in preventing nuisance as well as pollution.

Referring to water supplies Dr. WILSON says, "I beg to report that one of the two new wells sunk by the Parish Council at Grandborough began to yield a fair supply towards the autumn, which was found to be of good quality, but this does not solve the water question at Grandborough, because when the next dry season sets in there will be again great scarcity, and besides, this particular well is within a reasonable distance of only a very few of the cottages. It was unfortunate that the new public well sunk at the top of Newbold-on-Avon, though yielding a plentiful supply, was found to be useless, because the water is seriously polluted. I am glad therefore there is every probability of the Rugby water mains being extended to the village. The difficulties in respect to the supply of New Bilton are also to be met by extending the Rugby mains, and negotiations with regard to both schemes are in progress. I hope too that the scarcity of water which has prevailed for some considerable time back will at last be met by sinking the new well at Moreton's Hill, Hillmorton, which was ordered at a recent meeting."

SOLIHULL.

Dr. WILSON is able to report very favourably of this district and says that, "The general death-rate, Zymotic death-rate, and rate of infant mortality are below even the very low average of previous years, so that in every respect the general health of the district during the past year has been very satisfactory." The total number of cases notified under the Infectious Disease Notification Act amounted only to 64, 52 of which were Scarlet Fever, while only 2 cases of Typhoid Fever were reported. Dr. WILSON records a limited outbreak of Scarlet Fever at the Knowle Idiot Asylum, affecting two nurses and six patients, and as they had no proper isolation wards at that institution the patients and nurses were removed to the small block at the joint isolation hospital. Dr. WILSON says, "I pointed out to the officials of the Asylum at the time, that the idiot patients were only admitted by special favour, and the resolution passed at a subsequent meeting of the Council rightly decided that in future no more patients can be admitted from the Asylum, although there would be no objection to admitting nurses or servants of the Institution. It is to be hoped therefore that the Asylum Committee of Management will now be induced to build an isolation block so as to be prepared for any similar emergency."

With regard to public works, plans were prepared and submitted for the much needed new drainage of Ulverly Green. Dr. WILSON says, "As I pointed out several years ago when I first recommended this extension of the Olton scheme of drainage it will now become possible to sewer the whole of the Warwick Road between Olton and Solihull by extending the Olton and Solihull sewers whenever the erection of new buildings requires such extension." The flushing of the sewers and scavenging have both been well attended to. Dr. WILSON says, "The building in Knowle parish has extended so considerably of late years that I think the time has arrived for public scavenging for this parish."

SOUTHAM.

Dr. WILSON reports that the general death-rate is much below the average of previous years, and that though the Zymotic death-rate and the rate of infant mortality are both somewhat above the average this was entirely due to the mortality from Whooping Cough, a disease which does not

bear any relation to insanitary conditions. Only 39 cases were notified under the Act, including 6 of Scarlatina, 14 of Diphtheria, and 8 of Typhoid Fever.

Among works of a public nature which have been carried out during the year are the extension of the drainage of Long Itchington, in the upper part of the village, the laying of a new sewer to properly drain the upper and lower parts of Bishops Itchington, and the laying of a new outfall sewer at the lower part of Gaydon to carry off the storm water which at times flooded the lower part of the village, and backed up into the drains. A Local Government Board enquiry was held at Stockton with reference to the drainage of that village, and the scheme submitted received the approval of the Board.

Much attention has been given to the question of the Southam water supply, a large number of analyses of wells have been made, nearly half of which were found to be polluted. Dr. WILSON says, "Apart altogether from the more or less polluted state of nearly half the wells throughout the town (because I have little doubt the same ratio would hold good with regard to the wells from which samples have not been taken) the great scarcity of water in all parts of the town during times of drought is of itself sufficient to prove the crying necessity for a public water supply. In respect to scarcity in 1896 as many as 43 wells and pumps failed during the dry season, and last year 42, or about a third of the total number of wells all over the town. This number of wells which failed represents on the average 105 households without any supply at times." Dr. WILSON continues, "I have thus endeavoured to place all the salient facts and figures briefly and fairly before you, and I feel sure that those who could not be convinced before will be convinced now that a public water supply for Southam has become a question of extreme urgency in the health interests of the community."

WARWICK.

Dr. WILSON is able to report very favourably on the health of this district, and says, though the general death-rate is slightly above the exceptionally low rate of last year, it is considerably below the average of previous years, and though so many cases of Scarlatina were notified and the expense entailed in isolating so many in hospital was considerable, it is very gratifying that there was only one death from the disease. Indeed, the Zymotic death-rate for the year is not only exceedingly low, but lower than it has been during any previous year. The rate of Infant Mortality though comparatively low is somewhat above the average of previous years, but no sanitary significance attaches to this, because, as I have already said, the Zymotic death-rate is exceptionally low, and there were no deaths either from Whooping Cough or Infantile Diarrhoea. With the exception therefore of the more or less continued prevalence of scattered cases of Scarlatina, the general health of the district continued to be very satisfactory.

With regard to works of a public nature which were completed or carried out during the year, Dr. WILSON says, "I may say that the tank and sub-irrigation drains which were laid down on my recommendation at New Cubbington, have not only abated all nuisance, but have satisfactorily disposed of the sewage. The extension of the sub-irrigation drains at Whitnash has also abated the nuisance often complained of in respect to the Whitnash brook. Dr. WILSON continues, "With regard to the continued serious pollution of the Sherbourne, Sowe, and Avon, by the Coventry sewage, I trust that the course pursued by the Council in appointing a specially qualified sanitary engineer to visit the Coventry sewerage works occasionally, and to see that all the stipulations in the carefully drawn-up agreement are honestly carried out will have the effect of abating or at all events checking any increase of nuisance until the new sewage works are completed, and that these will be pushed on without further delay."

VITAL STATISTICS.

	Population.	Birth-rate.	Death-rate.	Zymotic Death-rate.	Infant Mortality per 1,000 Births.
Meriden	11,050	23·5	13·9	0·45	88
Rugby	14,050	31·2	16·2	1·21	122
Solihull	13,750	22·9	12·9	0·44	85
Southam	10,500	26·6	14·8	1·80	132
Warwick	11,510	22·8	13·2	0·34	114

THE COUNTY AS A WHOLE.

AREA.

As I have before noticed, the figures given in the area of the administrative County vary slightly from those recorded in previous years, and for this year the figures show the area to be 545,858 acres, of which 57,420 are Urban and 488,438 are Rural.

POPULATION.

The estimated population of the administrative County for the year is 336,219, compared with 327,004 in 1896, and 321,114 in 1895. I am pleased to note that there is a much larger estimated increase in the Rural districts than in many previous years, in fact the increase is almost as much marked in the Rural districts as in the Urban. It must be borne in mind however that these figures are only estimates, and that the only years in which we accurately know our population are the census years which occur only once every decade.

BIRTHS.

Nine thousand six hundred and fifty-one births were registered, compared with 9,333 in 1896. This is, I find, a larger number of births than have been registered for some years past. Calculated on the estimated population the birth-rate is 28·7, compared with 28·54 in the previous year. The rate for the whole of England and Wales was 29·7. The rates are almost identical for both classes of districts. In the Urban the rate was 28·62, and in the Rural 28·81. In the Urban districts, as is nearly always the case, the birth-rate was highest in Nuneaton and Chilvers Coton, the figure being 41·57, while Bulkington comes next with the much smaller figure of 33·0. Sutton Coldfield and Leamington with rates of 19·15 and 19·9 had the lowest birth-rates.

In the Rural districts the highest rate is observed in Atherstone, viz., 38·9, while the little district of Coventry has a rate of 36·6. As this however is calculated on only 11 births it is of very little importance. Foleshill had a rate of 34·3, while Tamworth and Rugby were the only other districts in which the rate exceeded 30. The lowest rate is found at Monks Kirby, viz., 18·6, while in Brailes it was as low as 22·3.

DEATHS.

Five thousand one hundred and twenty-one deaths were registered, viz., 2,972 in the Urban, and 2,149 in the Rural districts, giving a death-rate of 15·23, compared with 14·9 for the previous year. In the Urban districts the death-rate was 15·68, and in the Rural 14·90.

In the Urban districts the lowest rate is observed in Rugby and Sutton Coldfield, the figures respectively being 11·3 and 11·59. The highest rate is at Bulkington, viz., 26·73, while the rate of Nuneaton and Chilvers Coton also exceeds 20·0. With the exception of Aston Manor with a rate of 17·0 no other Urban district had a rate exceeding 14·0.

In the Rural districts the little district of Coventry with its very small population, had a rate of 6·6, but omitting this the lowest rate is found at Monks Kirby, where the figure is 9·8, while in Castle Bromwich and Nuneaton Rural the rates are below 12·0. Foleshill has the highest rate, viz., 17·7, while Rugby and Brailes are the only other two districts where the figure exceeds 16·0. The death-rate for England and Wales was 17·4 per 1,000.

ZYMOTIC DISEASE.

Six hundred and seventy-four deaths were registered as due to the 7 principal Zymotic diseases, as compared with 627 in 1897. The deaths registered were as follows:—Measles 109, Scarlet Fever 41, Diphtheria 37, Whooping Cough 116, Fever 34, and Diarrhoea 337. These figures show a slight increase in the total number of deaths. The increase is almost if not entirely due to the increased mortality from Diarrhoea, so that in every case, with the exception of Whooping Cough, there has been a marked reduction in the mortality from these preventable diseases. The greatest reduction has been in the case of Diphtheria, for whereas this year only 41 deaths have been registered from it, in 1896 no less than 82 were recorded. The Zymotic death-rate for the year is 2·0, while for the whole of England and Wales it was 2·15.

In the Urban districts the number of deaths from Zymotic disease was 525, compared with 453 in 1896. This gives us a rate of 2·75 per 1,000.

In the Rural districts the number of deaths registered was 149, giving the very satisfactory rate of 1·0 per 1,000, a rate lower than in 1896, and practically identical with that for 1895, which was 0·97.

SMALLPOX.—Not only has there been no mortality from Smallpox, but not a single case has been recorded in the whole of the County.

MEASLES.—One hundred and nine deaths were registered as due to this disease, compared with 142 in 1896, and 40 in 1895. As I have before explained Measles is a disease of early childhood, and on referring to the table we see that no less than 95 deaths occurred in children under 5 years of age. Measles tends to recur in epidemic waves about every two years, and it is a little surprising, as the number was comparatively high in 1896, there has not been a greater fall than is shown by the mortality statistics. I have before fully explained that Measles is one of the most fatal of the Zymotic diseases, and at the same time it is one over which sanitation has but little control. In a few districts the experiment of making Measles notifiable like Scarlet Fever and Diphtheria has been tried, and in the County an experiment has taken place in the Borough of Sutton Coldfield. From the nature of the disease it was unlikely that much good could be gained by notification, because the disease is infectious before the rash appears, and therefore before the disease can be identified. Again it is practically impossible to make any provision by way of isolation for cases, and as it is intensely infectious it would seem to be a proceeding of doubtful advantage. It is interesting therefore to note that the Medical Officer of Health for the Borough of Sutton recommends in his report that as the expense of notification in epidemic years is considerable, and as there appears to be no commensurate advantage, application should be made to the Local Government Board to remove Measles from the Schedule of notifiable diseases. This has since been done, so that at the present time there is no district in the County where cases of Measles are reported.

SCARLET FEVER has been much less prevalent than in the two previous years, 1,628 cases having been recorded. Last year I showed that the number of cases had been increasing since 1893. The mortality, too, has been considerably less, for while last year 60 of the cases proved fatal, this year only 41 died. Putting it in the form of a rate we see that the death-rate for 1896 was 0·18, while for last year it was only 0·12. It is rather curious to observe that although the population is rather less in the Rural districts, almost as many cases have been notified in one class of district as the other, the figures being 843 in the one and 785 in the other, but although this is so it will be observed that the mortality was nearly three times as great in the Urban as in the Rural districts, the figures being respectively 30 and 11. This is no doubt due to the greater density of population, and to the consequent less degree of sanitation which must of necessity be found. In the Urban districts it was most prevalent in Aston Manor, Nuneaton, and Warwick; while in the Rural Atherstone and Warwick suffered most. As regards isolation I find that in the Urban districts 423 were admitted to hospital, and in the Rural 420.

DIPHTHERIA.—I am very pleased to be able to record a great diminution in the number of deaths from this disease, for the total number including Croup is only 54, compared with 112 in the previous year. The total number of cases notified has been from Diphtheria 245, while 27 have been reported as Membranous Croup. This compares very favourably with 1896, when the number was 537, while in the previous year it was 346. Of these cases 194 occurred in the Urban districts, while 78 occurred in the Rural. The figures last year were 431 and 106 respectively. The number of deaths recorded was respectively 42 in the Urban, and 12 in the Rural, so that not only has there been much less prevalence of the disease in the Rural districts, but the case mortality has also been considerably less. In the Urban districts the disease was chiefly prevalent in Aston Manor, Erdington, Nuneaton, and Leamington, while in the Rural districts Brailes, Meriden, Southam and Warwick had the largest number of cases. Taking the County as a whole it will be observed that the case mortality was 19·8 compared with 20·8 last year and 20·2 in the previous year, so that the disease was less virulent in type.

WHOOPING COUGH again showed itself the most fatal of all the infectious diseases, 116 deaths being due to it, and of these no less than 108 were in children under 5 years of age. These figures are slightly in excess of those of the two previous years. In the Urban districts 77 deaths were reported, while only 39 were recorded in the Rural districts.

FEVER.—Thirty-four deaths have been registered as due to the three varieties of Fever, of which 32 were caused by Typhoid and 2 by other or doubtful forms. There is, therefore, a slight diminution compared with the previous year when 38 were registered. The total number of cases notified has been 258, of which 225 were due to Typhoid, 33 being ascribed to other continued fevers. The case mortality for the County as a whole was 13·2, which compares very favourably with that for last year when the figure was as high as 20·9. The case mortality in the Urban districts was 14·7 while in the Rural it was 11·5. In the Rural districts it was chiefly prevalent in Atherstone and Foleshill, 20 cases being reported at Atherstone and 76 in Foleshill. In the Urban districts Aston Manor and Nuneaton suffered most, there

being no cases recorded in Bulkington, Kenilworth or Rugby, among the Urban districts; while in the Rural, Brailes, Coventry, Farnborough and Monks Kirby were free from the disease.

DIARRHOEA.—No less than 336 deaths were registered from this disease, giving a death-rate of nearly 1·0 per 1,000, and of these 308 occurred in children under 5 years of age. This figure is almost double that of the previous year. It has been shown by many observers that the chief factor in producing fatal infantile Diarrhoea is temperature, and it has been conclusively proved that when the temperature of the earth four feet below the surface reaches 56°F . the rise of Diarrhoea mortality commences, so that whenever we get a somewhat prolonged spell of high temperature then we may certainly expect a considerable mortality among infants from Diarrhoea. Such conditions existed in 1897, and it is found therefore that the County suffered considerably, as did other parts of the country. It must be borne in mind too that, while the chief factor is high temperature, other conditions are also operative, and dirt, particularly of dwellings and of the surface round dwellings, pollution of ground, and of air, and improper feeding due to the ignorance of mothers, all tend to aggravate the disease and render it more fatal. It will be seen that no less than 283 of the deaths occurred in the Urban districts, while by far the greater number of them occurred in two of these districts, viz., Aston Manor and Nuneaton; indeed no less than 222 deaths were registered in Aston Manor, and 30 in Nuneaton. In the Rural districts a comparatively high mortality was shown in Atherstone and Foleshill, places which though rural in name, are at all events in certain parts of them urban in the nature of the surroundings and of the occupations carried on.

This year I have drawn out a chart, showing for each week in the year the number of cases notified from each of the three diseases, Scarlet Fever, Typhoid Fever, and Diphtheria. This shows at a glance the periods of the year when each of these three diseases was particularly prevalent, and as regards Scarlet Fever, we find that in the 3rd week in February and in the 3rd week in September the maximum degree of prevalence was reached, the number of cases that were notified in the Administrative County being in each week 52. It will be seen that the prevalence of the disease rapidly diminished, so that in the beginning of April, only 6 cases were notified in the first week, while the disease remained in abeyance during the months of May and June. After a rise in September, which continued for five or six weeks, it again fell at the end of the year. As regards Diphtheria, the chart shows that in no week was it unduly prevalent, in fact, the largest number of cases reported in any one week was 11, and this in the first week in November. Typhoid Fever showed a slight tendency to rise in the autumn, the maximum number of cases recorded in any one week being 18, and this in the second week of December. With this exception, the number of cases never reached 12. I may add that the chart is drawn up from the weekly returns sent in by the Medical Officers of Health.

OTHER DISEASES.

Only 4 deaths were registered as due to Influenza, viz., 2 at Sutton Coldfield, and 2 in Monks Kirby. It will be seen, therefore, that this scourge of a few years ago has practically ceased to trouble us of late. There has also been a diminished fatality from Pneumonia and other diseases of the respiratory organs, and this may be taken as an additional proof that true epidemic influenza has been absent. The number of deaths from Phthisis shows a slight increase on the previous year, but a marked decrease compared with 1895; the death-rate for the present year is 0·99, compared with 0·94 for 1896. The disease proved a little more fatal than in 1896, but less so than in 1895, the number of deaths registered being 432 in 1897, 345 in 1896, and 468 in 1895.

INFANT MORTALITY.

One thousand three hundred and ninety-seven deaths were registered in the first year of life, compared with 1,276 in the previous year, and these, calculated on the total number of births, give a rate of 144, compared with the figure of 136 for the previous year. This is slightly, perhaps, above the average, but on the whole may be considered fairly satisfactory.

In the Urban districts the rate was 163, almost identical with the figure for 1895, and in the Rural districts the figure was 120. The Urban rate of infant mortality is, undoubtedly, too high, and is to be ascribed largely to the excessive mortality from infantile Diarrhoea. The Rural figure, however, may be considered satisfactory. The rates of infant mortality vary, as one would expect, very much in different districts; the worst rate in the Urban districts is shown in Aston Manor, where the very high figure of 200 was reached. The next places are occupied by Nuneaton and Bulkington, respectively, with figures of 182 and 166. Kenilworth has the lowest rate, viz., 50, while the figure for Stratford-on-Avon is only 90. All the other districts, however, are fairly satisfactory.

In the Rural districts the worst rate is at Nuneaton, the figure being 177, but in no other district does the rate reach as high as 150. The best rates are found at Alcester, Coventry, Farnborough, Meriden, Solihull, and Stratford-on-Avon, in each instance in these districts the rate being less than 100.

A SUMMARY OF MATTERS INFLUENCING THE PUBLIC HEALTH, TO WHICH ATTENTION IS DIRECTED IN THE REPORTS OF THE DISTRICT MEDICAL OFFICERS OF HEALTH.

NOTIFICATION OF DISEASE.

At the present time every district but one in the County has adopted the Notification Act, and I regret to record that the Rugby Urban District Council cannot yet see its way to come into line with the other districts of the county. The matter has been so frequently and so forcibly put before this body by its Medical Officer of Health that I feel it is needless for me to add anything to his remarks. I have before pointed out that at the present time the statistics of disease of the County are incomplete because of the want of notification from the Rugby district.

ISOLATION AND HOSPITAL ACCOMMODATION.

As regards the Urban Districts, the position appears to be much the same as last year, in fact every district has now taken some step towards providing means of isolation for some of the infectious diseases. Rugby and Bulkington are the only two districts in which no cases were isolated, but whereas Rugby has provided a Small-pox Hospital, Bulkington has purchased some kind of portable hospital, but appears to have no site ready for its erection. I have referred in my summary of the Medical Officers' Reports of these two districts to this question, and I can only say that it is a matter of regret that the isolation has not been taken advantage of. The matter, as far as it refers to Rugby, must be fresh in the minds of your committee; an enquiry having comparatively recently taken place in connection with it. The position of Bulkington appears to be comparatively simple. Nuneaton is equipped with a hospital, which during the year received several cases of Scarlet Fever, and from the point of view of sanitary administration it is to be hoped that they will accept the alternative advice of their Medical Officer of Health, and make arrangements by which their cases can be received into the Nuneaton Hospital. This would be far better than relying on a temporary hospital, particularly as it does not appear, as I have said before, that any site for its erection has been found. Under these circumstances it may be taken for granted that even if under the stress of epidemic prevalence of disease a site could be found, the hospital would be erected too late to be of that advantage which the ratepayers would have a right to expect; for the greatest advantage to be obtained from an isolation hospital it must always be ready for the reception of the earliest cases which occur, and it has been found therefore that by an arrangement such as is above suggested not only is efficiency promoted, but the better result is obtained at a less cost to the communities interested.

Scarlet Fever is the disease which is most generally isolated, and it is interesting to note that out of 843 cases which were notified in the Urban districts, 423 were removed to hospital. This shows that 50 per cent. of all the notified cases were isolated, the figure being higher than in the previous year.

As regards the Rural districts the conditions remain much the same as last year. In several of these there is no hospital at all, and indeed as far as I know no steps have been taken during the year for the furtherance of isolation in these districts.

RIVER POLLUTION.

Complaints are still made as to the condition of the Tame on the one hand, due to pollution by the Tame and Rea District Drainage Board, and of the Sherbourne, Sowe, and Avon on the other due to pollution by the Corporation of Coventry. In both instances works are being pushed forward for the purpose of remedying the existing state of affairs. Minor pollutions are referred to by Dr. THOMSON, at Kineton, and by Mr. JEPHOTT, in the Alcester District.

VACCINATION.

There has been some improvement in the number of returns sent in by the Vaccination Officers, as last year I recorded that in 15 instances no statistics were given as to the work carried out under the Vaccination Acts. This year the number is 13, so that now in exactly half of the districts there is no statement as to the way Vaccination has been performed.

As far as the figures go however, I find that in the districts from which returns have been received, (of which full details are given in tabular form at the back of this report), 6,012 births were registered, and of these 3,772 were vaccinated. This gives us a percentage of 62·7 and is practically the same as that of last year, which was 61·1. It will be observed on referring to the table that while many of the districts in the County are fairly well protected by Vaccination, notably Aston Manor, Erdington, Stratford-on-Avon, Sutton Coldfield, Alcester, Castle Bromwich, and Stratford Rural, other districts such as Foleshill and

Tamworth show the greater proportion of infants to be unvaccinated. In Foleshill for instance out of 793 births registered, only 150 were successfully vaccinated, while eliminating those which died before vaccination could be performed, no less than 576 remained unvaccinated at the end of the year.

This deplorable state of affairs is becoming more marked year by year, the figures for Foleshill being considerably worse than in 1896, and it is to be feared that either on account of the malign influence exercised by the anti-vaccinationists or through carelessness on the part of parents some of the districts in the County will in a few years time contain a vast proportion of inhabitants unprotected by vaccination. It appears to be quite useless to endeavour to point to the examples of Gloucester and other places where Smallpox has broken out of late years. No doubt it is difficult to convince ill-educated people of the value of statistics; they are incapable of understanding their meaning, and there is a tendency for them to look upon all arrays of figures as open to suspicion. It is easier to adopt a *laissez faire* policy, and trust to individual good fortune to escape an attack of Smallpox. Still, experience has shown that there can only be one result in the end. Smallpox, in the more or less immediate future, when once it gains a hold in these districts, will not only cause an immense amount of mortality and suffering, but the trade and well-being of the district will be affected to a degree it is impossible to compute. An immense amount of responsibility therefore rests on the shoulders of those who endeavour to dissuade the people from protecting themselves. The excuse hitherto has been that no action could be taken pending the report of the Royal Commission. The report has now been issued, and Vaccination has again been vindicated. The opposition to its compulsory enforcement, however, still remains, and though a Bill has been introduced to Parliament to modify the procedure of vaccination it has been met by a storm of hostility, which shows that should it be carried even to a modified extent it will still be opposed by the anti-vaccinationists as fully as the old Act has been. It almost appears useless then to hope that better counsels may prevail, and all one can do is to wait for the inevitable lesson to be read and the stern teachings of science to be enforced by an epidemic of the most loathsome infectious disease affecting temperate climates.

ELEMENTARY SCHOOLS.

As in previous years schools have been closed in most of the districts for more or less serious epidemics of infectious disease affecting children. I have referred to them in the various summaries, and need not again call special attention to individual cases.

SCAVENGING.

I called attention in my last year's Report to the importance of the removal of refuse to public health. I notice that in the reports for this year considerable mention is made of this subject. Erdington has adopted public scavenging, as has also Kenilworth, on the urgent advice of their Medical Officers of Health. In the Rural district of Alcester part of the district is reported as being well scavenged, but the Medical Officer of Health says, "I could only wish that this official scavenging were carried out all over the district regularly and frequently, and thus prevent the filthy and reeking accumulation so often met with, only too frequently in dangerous proximity to sources of domestic water supplies, and otherwise by deleterious emanations threatening the health of the dwellers in their vicinity."

I may add here that in my opinion this question of removal of refuse directly or indirectly by the public Authority is one of the most pressing sanitary questions of the day. Year by year evidence is accumulating of the effects of impurities in air, water, and soil, and it is only by a prompt removal of impurities which will otherwise collect close to dwellings that a state of health, such as we know it is possible to reach, can be maintained. These demands for increased sanitary effort are the results of increasing experience. It must be remembered that the era of sanitation is not yet a quarter of a century old, and while many Authorities have done an enormous amount of public work in the removal of nuisances which were among the most evident, while they have provided in many instances public water supplies, systems of drainage and sewerage, and have provided for the isolation of infected persons, the removal of night-soil and other refuse has been left to individual effort. In districts in which a considerable portion is rural, agriculturalists who can utilize refuse on their land object to be taxed for the removal of the refuse of people in the more thickly populated portions of the district; but experience has shown that views such as these can only be allowed to prevail if the well-being of the public is to be sacrificed, and while I congratulate those districts whose public spirit has enabled them to grasp the importance of this question, I, at the same time, express the hope that, except in sparsely populated parts of the County, public scavenging will be considered one of the most important functions of the District Councils.

INSPECTORS' REPORTS.

In five districts only this year no Inspector's Report has been sent in on the form issued by the Clerk at the end of the year, and in each instance I have been unable to summarise the sanitary work done. Anyone conversant with statistical matters knows how difficult it is to collate tables drawn out on different

plans, and, though I do not desire to express an opinion on alternative methods, I would only say that as the table issued by your Committee has been adopted in the three counties of Warwickshire, Worcestershire and Staffordshire, as well as others, it is very much to be desired that a special effort should be made in the future to get the work of the Inspectors of Nuisances all tabulated on the adopted form. As far as they go, as a glance at the table proves, the reports show that an immense and increasing amount of real sanitary work is being effected, and I have no hesitation in saying that the excellent way in which the Inspectors of the County perform their difficult, and in many cases disagreeable, duties, accounts to a large extent for the high position which the County holds in a sanitary sense.

WEEKLY RETURNS.

The weekly returns of notification of infectious disease have been very satisfactorily sent in during the year, and as the Cities of Birmingham and Coventry also forward their statistics of notification, and as a copy of the figures is forwarded to every Medical Officer of Health by the Tuesday night's post in the succeeding week, every Medical Officer of Health in the County is able to see what diseases are prevalent, and from what district an invasion may possibly come.

CONCLUSION.

As in previous years I will conclude this Report with a table giving the death-rates in the County as a whole from Typhoid Fever, Diphtheria and Scarlet Fever. The following are the figures for the last nine years :—

	Typhoid Fever.	Diphtheria.	Scarlet Fever.
1889.	0·12	0·12	0·10
1890.	0·07	0·07	0·13
1891.	0·13	0·08	0·20
1892.	0·10	0·08	0·07
1893.	0·19	0·12	0·05
1894.	0·05	0·08	0·05
1895.	0·06	0·19	0·09
1896.	0·11	0·25	0·18
1897.	0·09	0·11	0·12

It will be observed that in each case there has been a decrease on the figures of 1896, but on working out the averages for the whole of the period it will be seen that in the case of Typhoid Fever and Diphtheria the rates are below the average, while in the case of Scarlet Fever the results are practically the same as the average. I am pleased to be able to state that my expectation of last year that the increase noticed of late years in the mortality from Diphtheria was about to subside has been verified, the death-rate for 1897 being less than half that for the previous year. The general death-rate is again below that of England and Wales, the Zymotic death-rate is also below that of the country at large, while the returns are even more satisfactory than they appear on the face because so large a proportion of the so-called Zymotic mortality was due to the fatality of Diarrhœa in the two large Urban Districts of Aston Manor and Nuneaton.

During the nine years that I have had the honour of making this Report I have had opportunities of observing the continually improving condition of the County from a public health point of view, and although progress in hygiene, owing in many instances to the large expenditure entailed, must of necessity be slow, I do not think I am mistaken in stating that matters hygienic now receive a much greater share of attention, with the consequence that not only is life made pleasanter, but the mortality and suffering induced by preventible disease are becoming more and more a diminishing quantity.

I remain,

My Lords and Gentlemen,

Your obedient Servant,

A. BOSTOCK HILL, M.D., D.P.H., Camb.,

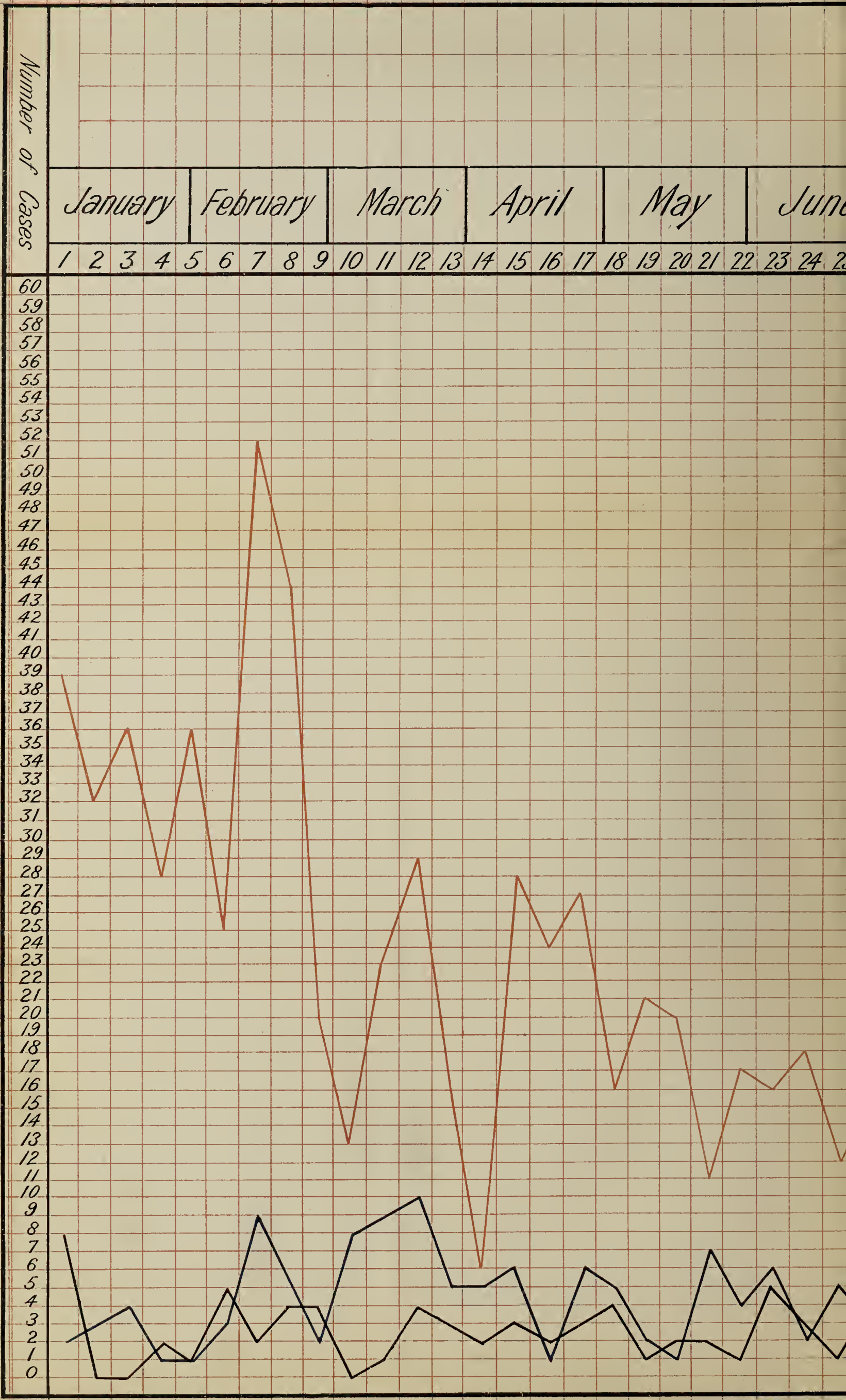
Fellow and Examiner of the Sanitary Institute,

Professor of Hygiene and Public Health, Mason University College, Birmingham,

Lecturer on the Laws of Health, Saltley Training College,

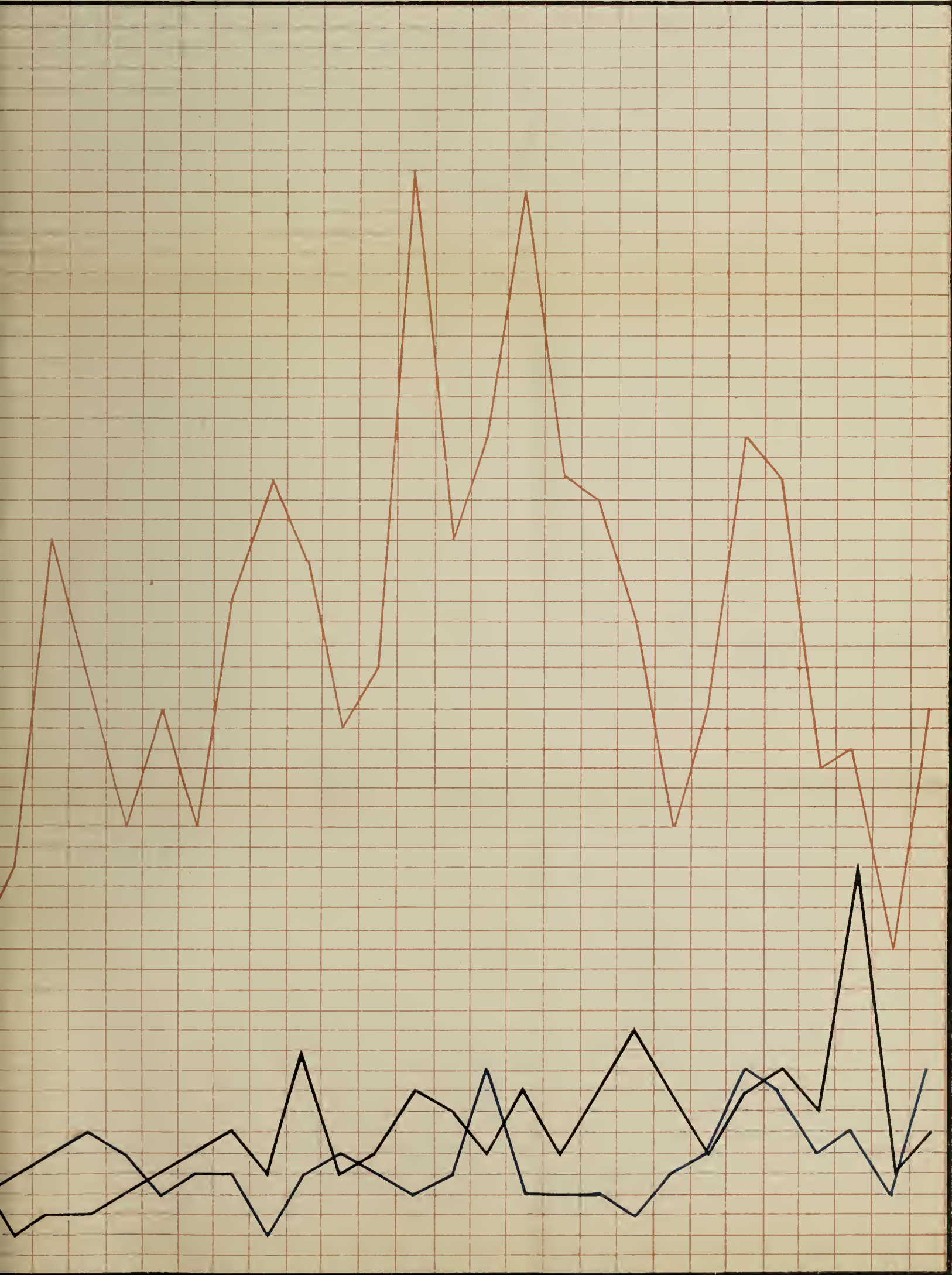
&c., &c.

Chart showing the number of cases notified each week
and Typhoid Fever (black)



one year of scarlet fever (red), and
the administrative County.

July				August				September				October				November				December					
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52



B. TABLE OF DEATHS during the Year 1897, in the RURAL SANITARY DISTRICTS of the COUNTY OF WARWICK, classified according to Diseases and Ages, and shewing also the Area and Population of such District, and the Births therein during the Year, together with Birth, Death and Zymotic Rates, and the Rate of Infant Mortality.

Districts.	Mortality from all causes, at subjoined ages.										Mortality from subjoined causes, distinguishing deaths in persons under five years of age.																																
	Area in acres.	Population per square mile.	Birth rate.	Death rate.	Zymotic death rate.	Infant mortality under 1 year to registered births per 1,000.	Population at all ages.		Registered births.	Mortality from subjoined causes, distinguishing deaths in persons under five years of age.																																	
							Census 1891.	Estimated to middle of 1897.		At all ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Smallpox.	Measles.	Scarlatina.	Diphtheria.	Croup ("spasmodic").	Whooping Cough.	Typhus.	Enteric or Typhoid.	Other or Doubtful.	Diarrhoea and Dysentery.	Cholera.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	Influenza.	Phthisis.	Bronchitis, Pneumonia, & Pleurisy.	Heart Disease.	Injuries.							
Alester	37,850	196	26·46	15·43	0·94	78	11,483	11,600	307	179	24	16	7	5	51	76	Under 5 5 upwds.	2	1	6	1	11	..	1	11	25	..	32			
Atherstone	21,330	447	38·9	15·1	1·07	142	14,076	14,885	581	225	83	21	7	11	52	51	Under 5 5 upwds.	..	1	1	..	1	6	3	11	14	25	..	1	19	25	1		
Bailes	45,158	94	22·3	16·9	1·1	133	7,215	6,686	150	112	20	4	6	4	25	53	Under 5 5 upwds.	1	2	..	..	1	..	1	1	..	..	..	..	..	..	..	..	9	4	7	18	..	4	
Castle Bromwich	7,724	203	26·1	11·4	2·0	125	2,293	2,452	64	28	8	3	...	...	7	10	Under 5 5 upwds.	5	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	2	5	..	..	..	..
Coventry	1,839	107	36·6	6·66	3·2	90	284	305	11	2	1	...	...	...	1	...	Under 5 5 upwds.	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Farnborough	1,697	118	28·28	13·55	0·5	83	1,697	1,697	48	23	4	1	1	2	7	8	Under 5 5 upwds.	..	1	2	4	..	2	30	27	25	11			
Foleshill	19,891	738	34·3	17·7	0·5	147	19,968	22,880	787	405	116	48	13	23	92	113	Under 5 5 upwds.	4	2	..	2	8	..	8	1	12	26	27	25	11	13	27	25	11			
Meriden ...	48,618	145	23·5	13·9	0·45	88	10,892	11,050	260	154	23	14	4	1	37	75	Under 5 5 upwds.	..	1	1	1	1	8	16	18	5	2			
Monks Kirby	9,917	112	18·6	9·8	nil	117	1,704	1,824	34	18	4	1	1	...	7	5	Under 5 5 upwds.	1	2			
Nuneaton	12,233	89	26·3	11·7	1·7	177	1,675	1,703	45	20	8	2	2	...	5	3	Under 5 5 upwds.	..	..	1	..	6	..	..	..	2	..	..	..	..	..	..	..	..	..	1	2	..	..		
Rugby ...	58,949	152	31·2	16·2	1·21	122	13,775	14,050	449	228	55	19	8	11	52	83	Under 5 5 upwds.	1	1	..	2	1	4	2	..	1	9	20	21	19	13	22	21	..	7		
Solihull ...	40,500	218	22·9	12·9	0·44	85	12,681	13,750	316	177	27	7	2	5	64	72	Under 5 5 upwds.	1	14	..	1	2	2	10	13	28	11	3	4	13	22	21	..	7
Southam	50,409	134	26·6	14·8	1·80	132	10,250	10,500	280	156	37	15	3	6	43	52	Under 5 5 upwds.	4	1	1	3	2	..	1	15	10	11	10	2	2	2	2	2		
Stratford-on-Avon	58,000	121	24·0	15·4	1·2	98	11,297	10,992	264	144	26	15	6	7	35	55	Under 5 5 upwds.	7	2	6	7	15	..	8	3	3	3			
Tamworth	21,698	319	33·0	12·7	0·6	119	10,122	10,819	368	126	44	6	7	2	31	36	Under 5 5 upwds.	8	3			
Warwick	52,625	140	22·8	13·2	0·34	114	12,188	11,510	263	152	30	11	4	9	43	55	Under 5 5 upwds.	2	1	9	7	23	..	3	5	5	5			
Totals	488,438	192	28·81	14·90	1·00	120	141,600	146,703	4,227	2,149	510	183	71	86	552	747	Under 5 5 upwds.	20	7	1	5	38	..	13	41	12	..	1	5	1	..	1	1	1	141	222	8	42	69	79			

C. TABLE OF DEATHS during the year 1897, in the COUNTY OF WARWICK, classified according to Diseases and Ages and shewing also the Area and Population of such District, and the Births therein during the Year, together with Birth, Death and Zymotic Rates, and the Rate of Infant Mortality.

Districts.	Area in Acres.	Population per Square Mile.	Birth Rate.	Death Rate.	Zymotic Death Rate.	Infant Mortality under 1 year to Registered Births per 1,000.	POPULATION AT ALL AGES.		REGISTERED BIRTHS.		MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.						MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS IN PERSONS UNDER FIVE YEARS OF AGE.																								
							Census 1891.	Estimated to middle of 1897.	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Continued Fever.				Diarrhoea and Dysentery.	Cholera.	24	25	26	27	28	29	30	31	32			
																								Typhus.	Enteric or Typhoid.	Other or Doubtful.	Whooping Cough.												Typhus.	Enteric or Typhoid.	Other or Doubtful.
Urban Sanitary Districts	57,420	2,190	28·62	15·68	2·75	163	166,187	189,516	5,424	2,972	887	381	118	129	817	640	Under 5	...	75	14	16	11	70	...	1	...	267	...	...	3	1	...	3	210	3	12			
																		5 upwds.	...	9	16	14	1	7	...	18	1	16	1	6	1	...	41	...	1	1	141
Rural Sanitary Districts	488,438	192	28·81	14·90	1·00	120	141,600	146,703	4,227	2,149	510	183	71	86	552	747	Under 5	...	20	7	1	5	38	...	...	...	41	...	1	...	...	1	1	141	...	8	
																		5 upwds.	...	5	4	6	...	1	...	13	1	12	5	1	...	5	1	...	3	1	134	185	222	69	
Warwickshire ...	545,858	394	28·7	15·23	2·0	144	307,787	336,219	9,651	5,121	1,397	564	189	215	1369	1387	Under 5	...	95	21	17	16	108	...	1	...	308	...	1	3	1	...	1	3	351	3	20				
																		5 upwds.	...	14	20	20	1	8	...	31	2	28	1	11	2	6	3	331	447	429	124				
				TOTALS ...		...	109	41	37	17	116	...	32	2	336	1	12	5	1	6	4	334	798	432	144	2													
				RATES PER THOUSAND ...		...	0·32	0·12	0·11	0·05	0·34	...	0·09	...	0·99	...	...	...	...	...	0·01	0·99	2·37	1·28	0·42												

D. TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS coming to the knowledge of the Medical Officers of Health during the year 1897, in the URBAN SANITARY DISTRICTS of the COUNTY OF WARWICK, classified according to DISEASES, AGES and LOCALITIES.

DISTRICTS.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.										NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.															
	Census 1891.	Estimated to middle of 1897.			FEVERS.								Whooping Cough.	FEVERS.																
					Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.		Puerperal.	Cholera.	Erysipelas.	Measles.													
(a.)	(b.)	(c.)	(d.)	(e.)	1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13
Aston Manor ...	68,639	78,919	2,588	Under 5 5 upwds.	...	115	21	10	...	2	1	...	...	...	11	...	...	...	38	...	...	...	...	...	...	...	...	...	...	...
Bulkington ...	1,400	1,272	42	Under 5 5 upwds.	...	261	69	2	...	76	2	...	4	...	56	...	...	138	...	...	...	...	...	...	...	...	...	...	...	...
Erdington ...	9,628	13,000	309	Under 5 5 upwds.	...	3	...	1	...	...	...	...	...	...	...	...	...	...	...	No Hospital.	...	...	...	...	...	...	...	...	...	...
Kenilworth ...	4,173	4,430	100	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...
Nuneaton and Chilvers Coton }	15,246	17,716	776	Under 5 5 upwds.	...	52	8	1	...	...	1	...	...	...	1	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...
Royal Leamington Spa }	26,930	27,320	544	Under 5 5 upwds.	...	87	21	3	...	21	...	...	...	...	13	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...
Rugby ...	11,262	14,750	340	Under 5 5 upwds.	...	11	...	...	...	1	...	...	...	...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...
Stratford-on-Avon	8,318	8,488	188	Under 5 5 upwds.	...	44	15	...	...	5	...	...	...	...	11	...	...	35	...	...	...	...	...	...	...	...	...	...	...	...
Sutton Coldfield	8,686	11,641	223	Under 5 5 upwds.	...	10	...	...	...	...	...	...	...	...	...	...	...	...	Only Small Pox Hospital.	...	...	...	...	...	...	...	...	...	...	...
Warwick ...	11,905	11,980	314	Under 5 5 upwds.	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS ...	166,187	189,516	5,424	Under 5 5 upwds.	...	267	42	15	...	3	2	...	...	...	14	56	...	105	...	...	...	...	...	...	...	...	...	...	...	...
					...	576	132	5	...	128	3	...	5	...	125	97	...	318	7	...	...	...	...	...	...	...	...	...	...	...

Only Small Pox Hospital.

F. TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS coming to the knowledge of the Medical Officers of Health during the year 1897, in the COUNTY OF WARWICK, classified according to DISEASES, AGES, and LOCALITIES.

DISTRICTS.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.										NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.																				
	Census 1891.	Estimated to middle of 1897.			(a.)	(b.)	(c.)	(d.)	(e.)	FEVERS.						Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	FEVERS.						Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	FEVERS.					
										Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.					Erysipelas.	Measles.	Whooping Cough.	Typhus.	Enteric or Typhoid.	Continued.					Relapsing.	Puerperal.				
(a.)						1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13				
Urban Sanitary } Districts	166,187	189,516	5,424	Under 5 5 upwds.	...	267	42	15	...	3	2	...	...	...	...	14	56	...	...	105	...	...	...	...	...	...	...	...	...	...	...
					...	576	132	5	...	128	3	...	5	...	125	97	318	7	1		
Rural Sanitary } Districts	141,600	146,703	4,227	Under 5 5 upwds.	...	210	15	5	...	3	11	...	...	...	...	7	...	...	...	100	...	...	...	1	...	...	...	...	...	...	...
					...	575	56	2	...	91	17	...	9	...	110	320	8	7		
TOTALS	307,787	336,219	9,651	Under 5 5 upwds.	...	477	57	20	...	...	6	13	...	...	...	21	56	...	...	205	...	...	...	1	...	...	...	...	...	...	...
					...	1,151	188	7	...	219	20	...	14	...	235	97	638	15	8		

G. TABLE shewing SANITARY WORK done in the INSPECTORS OF NUISANCES' DEPARTMENTS during the Year 1897, in the URBAN SANITARY DISTRICTS of the COUNTY OF WARWICK.

[illegible]

1. RETURN, shewing the number of Births Registered, together with the number of such cases successfully Vaccinated or otherwise disposed of in the Districts of the COUNTY OF WARWICK during the year ending 31st December, 1897.

VACCINATION DISTRICTS.	No. of Births Registered during the year ending 31st Dec., 1897.	No. of these cases successfully Vaccinated.	Insusceptible of Vaccination.	Died before Vaccination.	Cases under Postponement.	Removals to other Districts out of the Union.	No. of cases not to be found.	Number of cases remaining Unvaccinated at date of this Return.
URBAN DISTRICTS.								
Aston Manor ...	2,520	1,802	10	314	69	10	194	121
Bulkington ...	...	...	...	...	...	...	...	...
Erdington ..	354	261	4	25	12	1	4	47
Kenilworth ...	...	...	...	...	...	...	...	...
Nuneaton and Chilvers Coton }	...	...	...	...	...	...	...	...
Royal Leamington Spa }	544	358	1	32	29	5	7	112
Rugby ... ..	...	...	...	...	...	...	...	...
Stratford-on-Avon	194	158	...	18	...	8	...	10
Sutton Coldfield	223	156	...	12	17	...	3	35
Warwick ...	...	...	...	...	...	...	...	...
RURAL DISTRICTS.								
Alcester	361	284	...	36	6	5	6	24
Atherstone ...	...	...	...	...	...	...	...	...
Brailes ... ..	...	...	...	...	...	...	...	...
Castle Bromwich	64	43	...	3	4	...	...	14
Coventry	11	3	...	1	...	...	...	7
Farnborough ...	...	...	...	...	...	...	...	...
Foleshill	793	150	...	67	..	...	...	576
Meriden ... ..	...	...	...	...	...	...	...	...
Monks Kirby ...	...	...	...	...	...	...	...	...
Nuneaton ... ..	...	...	..	..	...	...	...	...
Rugby ... ..	...	...	...	...	...	...	...	...
Solihull	324	204	...	16	8	...	6	90
Southam ... ..	...	...	...	.	...	...	...	...
Stratford-on-Avon	256	185	...	13	...	4	...	54
Tamworth	368	168	...	37	3	2	...	158
Warwick ... ..	...	..	...	...	...	...	...	...
Totals	6,012	3,772	15	574	148	35	220	1,248

JUNE, 1898.

Reports of
Medical Officers of Health.

DR. BOSTOCK HILL'S
SUMMARY.